

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Complete Listing of Claims:

1. (Currently Amended) A method of fabricating a plurality of micro probes comprising the steps of:

~~defining the shapes of a plurality of probes as~~ providing one or more masks, each of said one or more masks including a plurality of probe shapes;

applying a photoresist to first and second opposing sides of a metal foil;
overlaying one each of said masks on opposing first and second sides of said metal foil;

exposing said photoresist to light passed through each of said masks;

developing said photoresist;

removing a portion of said photoresist to expose a portion of said metal foil;

and

applying an etcher to the surface of said metal foil to remove said exposed portion to produce a plurality of probes, wherein each of said plurality of probes contains fewer residual stresses than an identically-shaped probe formed using a mechanical stamping or machining process.

2. (Original) The method of claim 1 comprising the additional step of chemically polishing and plating the plurality of probes after the application of the etcher to the surface of said metal foil.
3. (Previously Amended) The method of claim 1 wherein said metal foil is composed of a beryllium-copper alloy.

4. (Original) A micro probe manufactured according to the method of claim 1 said micro probe comprising:

a probe base having a generally uniform thickness bounded by a plurality of edges and extending for a substantially straight length in a plane;

a probe shaft connected to said probe base said probe shaft of said generally uniform thickness, bounded by a plurality of edges, and extending along a curved expanse within said plane;

a probe end connected to said probe shaft said probe end of said generally uniform thickness, bounded by a plurality of edges, and extending for a substantially straight distance within said plane said straight distance being approximately parallel to said straight length; and

a scallop running substantially around a periphery comprised of the edges of said probe base, said probe shaft, and said probe end.

5. (Original) The micro probe of claim 4 wherein said uniform thickness is preferably between 2 mils and 5 mils.

6. (Original) The micro probe of claim 5 wherein said uniform thickness is most preferably between 3 mils and 4 mils.

7. (Original) The micro probe of claim 6 wherein said scallop further comprises a scallop base and a scallop tip.

8. (Original) The micro probe of claim 7 wherein said scallop base and said scallop tip are separated by a substantially uniformly distance.

9. (Currently Amended) A probe test head comprising:

a first die comprised of first and second opposing planar surfaces said first die further comprising a pattern of first die holes extending through said first die in a direction perpendicular to both of said first and second planar surfaces;

a second die comprised of third and forth opposing planar surfaces said second die further comprising a pattern of second die holes corresponding to said pattern of first die holes said second die holes extending through said second die in said direction wherein said third planar surface is arranged in planar contact with said second planar surface such that said second die holes are offset from said first die holes in a substantially uniform direction; and

a plurality of probes one each of said probes extending through one of said first die holes and one of said second die holes, wherein said probes having a surface finish commensurate with having been formed by etching are manufactured according to the method of claim 1.

10. (Previously Cancelled)

11. (Original) The probe test head of claim 9 wherein each of said plurality of probes is substantially uniform in shape when compared to each other one of said plurality of probes.

12. (Original) The probe test head of claim 9 wherein the length of each of said plurality of probes is preferably within .002 inches of every other one of said plurality of probes.

13. (Original) The probe test head of claim 12 wherein the length of each of said plurality of probes is preferably within .001 inches of every other one of said plurality of probes.

14. (Original) The probe test head of claim 13 wherein the length of each of said plurality of probes is preferably within .0005 inches of every other one of said plurality of probes.